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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,588	11/10/2003	Henry Wong	Zywyn.02	6243

23616 7590 12/20/2005

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EXAMINER

STERRETT, JEFFREY L

ART UNIT	PAPER NUMBER
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2838

DATE MAILED: 12/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/705,588	Applicant(s) WONG ET AL.	
	Examiner Jeffrey L. Sterrett	Art Unit 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some * c) ☐ None of:
 - 1. ☐ Certified copies of the priority documents have been received.
 - 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims.

Therefore, the regulated oscillator block 110 responsive to a boosted voltage level feedback as recited by claim 1 must be shown or the feature canceled from the claims.

Therefore, the switching device comprising a diode recited by claims 8 and 13 must be shown or the feature canceled from the claims.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance. No new matter should be entered.

2. Claims 1-4, 8, and 13 are objected to because of the following informalities.

In line 8 of claim 1 "in a switch capacitor" makes little to no sense at all. Is this phrase an improper reference back to the switch capacitor block of line 7 or is it intended to be a new recitation of a switched capacitor? It is noted that in line 6 of claim 1 "controls" should simply be –control-.

In line 2 of claim 3 "VCC and VSS" should be deleted since reference characters from the figures should not be in the claims.

In lines 1 and 2 of claim 4 "the VDD and VSS voltage level" lacks proper antecedent basis.

Claims 8 and 13 are vague and indefinite because the language "can be" does not positively and distinctly set forth whether the switching device is or is not a diode but merely sets forth the possibility that the switching device could be a diode.

Appropriate correction is required.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1, 3-8, and 10-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Tamagawa (US 5,532,916).

Tamagawa discloses a circuit comprising a regulated oscillator block (151) providing an oscillator frequency responsive to boosted voltage level feedback (+2VDD and –2VDD), a dual phase cycling block (149) outputting a set of control signals (O1, O2, and O3) responsive to the oscillator frequency, a switch capacitor block (figure 1 or

10) providing a boosted voltage level (+2VDD and -2VDD) responsive to the control signals as recited by claims 1, 3, and 4.

Tamagawa discloses an apparatus comprising two output voltage terminals providing bipolar output voltages (+3VDD and -3VDD), at least two first switching devices (60, 63, 66, and 69) charging a first switching capacitor (57) to the first voltage equal to an unipolar input supply voltage (VDD), at least two second switching devices (67 and 70) charging a second switching capacitor (58) to the first voltage to provide a third voltage, a third switching capacitor (52 or 55) receiving and storing the first voltage, a fourth switching capacitor (59) receiving and storing the third voltage, and an oscillator (151) wherein at least one switching device is formed by a P channel MOSFET (129, 130, 133, or 134), a N channel MOSFET (131, 132, 135, 136, or 137), and an inverter (140 or 141) as recited by claims 5-8.

Tamagawa discloses a circuit comprising a first plurality of switching devices (60, 63, 66, and 69) charging a first transfer switching capacitor (57) to the first voltage equal to an unipolar input supply voltage (VDD), a second plurality of switching devices (67 and 70) charging a second switching capacitor (58) to the first voltage to provide a third voltage, a third switching capacitor (52 or 55) receiving and storing the first voltage, a fourth switching capacitor (59) receiving and storing the third voltage, and an oscillator (151) wherein at least one switching device is formed by a P channel MOSFET (129, 130, 133, or 134), a N channel MOSFET (131, 132, 135, 136, or 137), and an inverter (140 or 141) as recited by claims 10-13.

5. Claims 2, 9, and 14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Tamagawa in combination with Yu (US 6,281,705).

Tamagawa discloses a circuit/apparatus as explained above and as recited by claims 2, 9, and 14 except for specifying that the device is integrated on a single silicon substrate. Yu discloses that integrating a circuit/apparatus on a single silicon substrate was an old and known expedient in the art at the time of the invention. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the circuit/apparatus of Tamagawa by integrating it on a single silicon substrate as taught by Yu in order to minimize the size of the circuit/apparatus in an old and known manner.

6. Applicant's arguments filed November 22, 2005 have been fully considered but they are not persuasive.

In regards to the remarks concerning the number of clock cycles and phases, this issue is moot. Although the number of clock cycles and phases in applicants disclosed invention may or may not be different from the number of clock cycles and phases disclosed by Tamagawa, the invention as currently recited by the claims does not set forth any such distinction either implicitly or explicitly. Thus without any claim language stating otherwise, there is no patentable distinction regarding the number of clock cycles and phases between applicants recited invention and that disclosed by Tamagawa.

In regards to the remarks concerning the purpose of the flying capacitors, this issue is moot. Although the flying capacitors in applicants disclosed invention may or may not operate differently from the capacitors disclosed by Tamagawa, the invention as currently recited by the claims does not set forth any such distinction either implicitly

or explicitly. Thus without any claim language stating otherwise, there is no patentable distinction regarding the flying capacitors between applicants recited invention and that disclosed by Tamagawa.

In regards to the remarks concerning the number of MOSFET's, is without merit. The way the claims are currently written all that a reference must do is at a minimum have each and every recited element (whether the reference has additional elements to those recited is immaterial). As noted by applicant Tamagawa discloses a power supply utilizing 9 MOSFET's which meets the claim limitation that the power supply comprise "7 or less MOSFET devices". It should be noted also that in general the limitation of an element and its function in a combination where the remaining elements still perform the same functions as before is considered to involve only routine skill in the art and such would have been an obvious modification.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

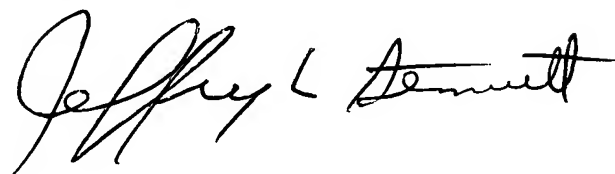
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey L. Sterrett whose telephone number is (571) 272-2085. The examiner can normally be reached on Monday-Thursday & 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571) 272-2084. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jeffrey L. Sterrett
Primary Examiner
Art Unit 2838

A handwritten signature in black ink, appearing to read "Jeffrey L. Sterrett", with a stylized, cursive script.